

## **Uinta Basin Update April 10, 2015**

### **Most Current Updates**

#### **Community Air Sensor Training by ORD on July 9, 2015**

- The Ute Tribe is very interested in sending someone to this training. They have hired a Community Outreach Coordinator named Mario Moore who is Minnie's first choice. As an alternate, Preston McDonald for her Air Program would like to attend. We nominated the Ute Tribe and we are waiting to hear if they've been selected

#### **ORD Monitors and training for the Schools**

- On April 8, 2015, Region 8's Kyle Olson and Josh Rickard installed four air quality monitors donated by ORD, for schools in the Uinta Basin. Monitors were installed at Eagle View Middle School, Uinta River High School, La Pointe High School and Uinta High School, with a fifth monitor co-located in Ft. Duchesne. Josh trained the school representatives on how to use the air monitors.

#### **Impact of lower energy prices on the Tribe**

- Production is slowing down, which is hurting the economy. Newfield laid off 15% of their workforce a couple weeks ago and Baker Hughes laid off 80 employees. Operators are not drilling anything new because of the cheap price of oil.

#### **Tribal Business Council Meeting**

- We are delaying the RA/Tribal Advisor meeting until after the May elections.
- We have prepared talking points for a proposed RA/Tribal Advisor visit to the Tribal Business Council to discuss the meaning of pending ozone nonattainment designation, and timelines/responsibilities of the Tribe and EPA to develop an Emission Inventory and attainment demonstration. This meeting may encompass other water, enforcement and land management programs that are active in the Basin.
- Minnie requested that I schedule directly with the Council's Secretary, Reannin Poppef (sp?) at 435 722-5141 for a mid-March timeframe. Minnie would like to attend the meeting.
- Cindy would like to have a summary of quantified emission reductions that have already been accomplished through NEPA and enforcement actions, so that operators who have already stepped up can be recognized moving forward.

#### **Meeting with the Tribe and Industry to Discuss Voluntary Controls on Existing Sources**

- We are co-hosting with the Ute tribe a meeting with oil and gas operators on April 14, 2015. The purpose of the meeting is to engage industry with operations in the Uinta Basin in discussions concerning emission reductions from the ~9,000 existing oil and gas sources on tribal lands. This will be a collaborative meeting with staff from the Ute Tribe, Utah Division of Air Quality, EPA and Uinta Basin industry operators.
- Doing voluntary emission controls now would prepare the basin to receive a lower nonattainment ozone classification, fewer restrictions on future oil and gas development, and more flexibility in returning to attainment status.
- If industry (and/or the Tribe) does not want to participate in a voluntary emission reduction

strategy now, EPA will need to consider a Reservation specific rule (FIP) for reducing VOC and NOx emissions from existing and new oil and gas sources.

- Any reservation specific FIP would be consistent with Utah's rules for emission reductions at existing oil and gas sources on state land and be consistent with any requirements developed under EPA's national oil and gas rule. The FIP would be implemented in advance of the 2017 ozone designations process, in time to achieve early reductions that could lead to improved air quality in the basin.
- Industry would like more certainty and a level playing field. The state is concerned that no matter what they do to control sources on state land, they won't meet their attainment dates without proactive control strategies on tribal land, which has ¾ of the basin's sources.
- The Tribe is supportive of this meeting, as a way to build on what was discussed at a similar meeting in Denver 1 ½ years ago. Minnie sent me a list of participants from that meeting, her meeting notes and the letter WEA sent that outlined voluntary measures its participants committed to doing as a result of the meeting.

### **Emission Inventory**

- Region 8 is working closely with the state of Utah to develop an emission inventory (EI) on tribal land for the Uinta Basin's possible future ozone nonattainment area. We are supporting an EI effort that ensures that our efforts result in a SIP- and FIP-quality inventory on state and tribal land. DAQ has released its second iterations of the EI white paper/protocol that identifies the three sources of data that will establish the Phase 1 inventory, and the six components of an EI that are expected to account for 90% of the source-specific and site-specific emissions. We have agreed to move forward with a single, yet multi-jurisdictional, data warehouse to hold the emissions data.
- The DAQ's white paper outlines the schedule for what needs to be done, for SIP planning and modeling purposes. This second draft of the white paper will be discussed at the mid-April workgroup meeting.
- The three main data sources identified are: County-wide emission estimates, based on operator surveys that will become available in June, 2015, funded by the 3-State Air Quality Study; the tribal minor source registry data on tribal lands; and UDAQ's online oil and gas inventory database currently in the design and development stage.
- The six components of the first iteration of emissions inventory are: dehydrators, engines, heaters, truck loading, pneumatic pumps and oil condensate tanks.
- The last webinar/meeting was on Feb. 26<sup>th</sup>; At the Feb. 26<sup>th</sup> webinar/meeting, we advocated that the inventory include efficacy of control and capture systems for emissions from storage tanks and glycol dehydrators, unintentional gas carrythrough (common things like stuck open dump valves off the separator) and produced water pond emissions. The response to our request was that these sources should/will be considered in future iterations when we have better tools/estimators for calculating emissions from those source categories.

Here is the workgroup's proposed timeline:

- Stakeholder meeting at DAQ to review and comment on WEA draft protocol for the Uinta Basin inventory and the Inventory Prep Plan Jan. 28, 2015
- Protocol for inventory preparation April 15, 2015
- DAQ/WEA scoping meeting for batch upload process to Permit Database EI May 1, 2015
- Request for data to oil and gas operators June 1, 2015

- Calculation of the area source oil/gas emissions July 1, 2015
  - Upload of the operator submittals Oct. 1, 2015
  - Compilation of the point and area sources emissions Jan. 1, 2016
- Instead of a written cooperating agreement between DAQ and the Tribe to resolve sovereignty concerns in the sharing of data, we want to move forward with a steering committee of the regulatory agencies. EPA/State/Tribe all agree that a consistent, integrated approach is necessary, and there are benefits to a common database.
  - Preston and Minnie have not presented the EI database issue to the Tribal Business Council. However, Preston has said that the Tribal Business Council is on board with the Tribe's participation in the EI process. We are moving forward with informal agreement about who will have access to the data and how the data will be shared with EPA, BLM, WEA, Bingham Research Center, WRAP and other stakeholders, and where the data will be hosted.
  - The Ute Tribe is holding elections in the May, 2015 timeframe, and they anticipate getting new council members. A key issue for the State and EPA/Tribe is building trust with the Legislature/Tribal Business Council that we are going to solve the air quality problem while understanding the economic development impact moving forward. We can point to Wyoming UGRB and the Colorado Front Range NAAs as examples where oil and gas development hasn't slowed down because industry/states put controls on existing sources.
  - DAQ has the authority under its rules to request data from industry. We discussed requesting inventory data in a voluntary approach, but employing EPA's CAA 114 authority as a back up plan to request information if necessary.
  - While much of the inventory work so far has had a NEPA and a National Emissions Inventory (NEI) focus, as we shift towards a more regulatory process, we want to ensure that the resultant inventory can be used to develop Reasonable Further Progress plans and/or attainment demonstrations.
  - **Next Steps:** Major stakeholders including EPA Region 8, the Utah DAQ, the Ute Indian Tribe, BLM, Western Energy Alliance (WEA), Western Regional Air Partnership and Utah State University met again on January 28<sup>th</sup> to refine the EI white paper/protocol and discuss the Inventory Prep Plan. WEA hopes to have a draft protocol that shows 80% capture of the emissions. Alexas Gilbert is performing an analysis of a representative sample of the ~5,100 tribal minor source registrations to derive place-based speciation profiles that can be used to derive emission factors. WRAP is using the IHS interdeck database and USGS publications to identify individual well production rates, and field and formation data. The focus is on identifying location and emissions of storage tanks, pneumatic controllers, glycol dehydrators and area sources/de minimis sources (less than 5 tpy VOCs).

### **Additional Updates/Background**

#### **Utah Ozone Advance**

- Utah Department of Air Quality enrolled in Ozone Advance on May 21, 2012.
- Utah DAQ's General Approval Order for Oil and Gas was finalized on June 5, 2014. It covers facilities that process up to 50,000 barrels of crude oil and condensate combined over a rolling 12-month period. Emission controls and equipment specifications limit criteria pollutant and hazardous air pollutant emissions. If a source cannot meet the requirements of the GAO, it must submit a Notice of Intent to obtain an Approval Order.
- Utah's Board adopted four proactive final rules on October 1, 2014 for existing sources. The

rules will retrofit oil and gas industry equipment to assist in VOC emission reductions. The four rules include:

- Equipment must be properly maintained and operated.
- Accelerates implementation of NSPS standards including replacing high-bleed controllers with low-bleed or no-bleed controllers. Phased, Dec. 2015 for Uintah and Duchesne counties and April 2017 for state-wide.
- All new flares must be equipped with an automatic igniter; existing flares to be retrofitted by Dec. 2015 for Uintah and Duchesne counties and April 2017 for state-wide.
- Tank Truck Loading required to be bottom filling or submerged pipe filling on tanker trucks by Jan, 2015.

#### **Ute Indian Tribe Ozone Advance**

- The Ute Indian Tribe, enrolled in Ozone Advance on July 18, 2013. However, they have not submitted a Path Forward letter yet. I re-sent the Ozone Advance Guidance and Path Forward Tips to Preston and Minnie. Minnie is going to consult with the Tribal Business Council to see if they still support the Tribe's participation, and she'll let me know by mid-March.
- The Ute Tribe's Air Program is planning to develop an air management plan and an environmental code that is based on the solid waste code in Fort Berthold. We've discussed with the tribe the possibility of developing an ordinance to incorporate the four rules for existing sources that the state adopted on Oct. 1, for tribal sources.
- Other aspects of their Ozone Advance Path Forward may include:
  - Establish an ambient air monitoring program, which will be led by Mike Natchees. As of June 1, they've retained MSI as the third-party monitoring operator for the Redwash and Ouray monitors, and they'll take over Myton and Whiterocks on Oct. 1<sup>st</sup>.
  - Develop an oil and gas industry compliance, inspection and maintenance program. Region 8's Alexis North has been out there a couple times demonstrating use of the infrared equipment to identify fugitive emissions. They've hired a certified inspector/compliance officer, Ty Navanick, and a new Air Quality Technician, Lonnie Fabel.
  - Establish permitting programs following the Clean Air Act, beginning with prevention of significant deterioration (PSD) and working up to Title V.
  - Develop an emission inventory; since March 2014, they've got nine monitors operating year-round, they'll get their first quarterly data in July and they'll have a full year in March 2015.

#### **Oil and Gas GP/FIP/PBR for Indian Country Schedule**

- ANPRM Published -- 06/05/2014
  - Options Selection for NPRM Proposal – TBD
  - Develop Draft NPRM Package - TBD
  - FAR for Proposal – TBD
  - OMB Review of Proposal – 60-day review ending TBD
  - NPRM Signature – TBD
  - Publication of Proposal – TBD
  - Develop Draft Final Rule Package (SAN 5727) – TBD
  - FAR for Final Rule – TBD
  - OMB Review of Final Rule – 60-day review ending TBD
  - Signature of Final Rule – 03/01/16
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- This rule is likely to be delayed until December, 2016 and there is high uncertainty over whether

the options selection would allow the rule to address existing sources. Attainment demonstrations under the revised ozone NAAQS would not be required until the 2019-2021 timeframe, depending on the classification. This is why we are proposing a meeting with the tribe and industry to discuss voluntary controls on existing sources.

### **Winter Ozone Study**

- The Utah Department of Air Quality (UDAQ) released the Winter Ozone Study on March 26, 2014, which identified the oil and gas industry, combined with cold weather inversions, as the prime contributor to the ozone problem in northeastern Utah. In the winter of 2013, ozone levels at one monitoring station in the Uinta Basin reached 142 ppb, about 90% higher than the National Ambient Air Quality Standard NAAQS (75 ppb). Seasonal controls and new rules to reduce pollution from legacy equipment were identified as key mitigation strategies.
- The 2<sup>nd</sup> draft of the 2014 UBOS field study report is finished, and a final report was posted on the DAQ's website in February.

### **Monitoring**

- Snow cover has been sparse and temperatures relatively warm in January 2015; there was light ozone production in the first week of January, with Ouray reaching 67 ppb (8-hour average) on Jan. 7. Without significant snowfall and colder temperatures, this may be a low ozone winter.
- For the area we designated unclassifiable, Utah DEQ's monitor located in Roosevelt has a current 2012-2014 design value of 77 ppb, which is based on a couple of moderately high days in the first week of January 2014, and a few more moderate days in the summer. We anticipate the design value will be certified in May 2015.
- EPA transferred oversight on June 1, 2014 to the Ute Tribe to operate the Ouray and Redwash monitors in the Uinta Basin, and the Tribe began operating the Myton and Whiterocks monitoring stations in October 2014.
- The Tribe received an EPA monitoring grant in late July, 2014; they have submitted an approved Quality Assurance Project Plan to EPA and the stations have begun gathering regulatory data.
- On April 29, 2014, the RA sent a letter to the Ute Tribe's Business Committee members and the Energy and Minerals Department Director, expressing our support for the Ute Indian Tribe's commitment to developing an ambient air monitoring program. Utah has also been providing technical assistance to the Tribe.

### **Ozone Modeling**

- Several groups are working on photochemical air quality modeling for winter ozone episodes, including UDAQ, EPA, NOAA, BLM, Utah State University and University of Utah. NOAA recently published modeling results suggesting that CH<sub>4</sub> and total VOC emissions for the oil/gas sector within the Uinta Basin in the 2011 NEI are underestimated by a factor of 4.8 and 1.8, respectively, and that NO<sub>x</sub> emissions are overestimated. EPA modeling is also biased low for VOC and biased high for NO<sub>x</sub>, and the EPA model is not able to reproduce observed ozone levels using the 2011 NEI. UDAQ model simulations do reproduce the observed ozone levels, and this might be a result of updates to the VOC emissions or speciation data in the UDAQ inventory. There remains large uncertainty in whether the modeling accurately represents O&G emissions, transport processes, and chemistry within the Uinta Basin. The groups are collaborating in the analysis of emissions data and model performance with the goal of developing model scenarios that can be used for ozone attainment planning.

### **Revised Ozone NAAQS Implementation Schedule**

- Revised ozone NAAQS proposed on December 1, 2014;
- Finalized October 1, 2015
- State submits recommendations on air quality designations for the revised ozone standard October 1, 2016
- EPA issues final designations in October 2017
- SIP Elements: Areas designated nonattainment have 2 years to submit emission inventories, RACT SIPs and emission statement SIPs; 3 years to submit 15 percent RFP plans and Moderate area attainment demonstrations; and 4 years to submit 3 percent per year RFP plans and attainment demonstrations for Serious and higher areas.

### **Community Outreach and Capacity Building**

- Minnie is very interested in scheduling training and capacity development for the Tribal Air Program inspection/compliance staff in the use of I/R camera and the Hi-Flow Sampler. We don't need to wait for the RA/Tribal Advisor visit to do this training. Cindy Beeler submitted a RARE grant application to ORD to fund this work.
- The Tribe's participation in EPA's School Flag program is on hold, pending approval that is required through district channels. They will start the process this spring in anticipation of participating next year.
- As part of the tribe's enrollment with Ozone Advance, EPA can offer the Ute Indian Tribe's Air Quality group technical assistance and capacity building through various research efforts. We have discussed assisting with the produced water pond measurement work that is currently underway using EPA's OPSIS, which is a UV open-path spectroscopy instrument that measures benzene, toluene, and xylene. The equipment can be deployed and left for a few months to observe seasonal, diurnal and operational variations.
- We have also discussed conducting a field campaign to collect actual emission data on a sizeable sample size of pneumatic controllers that would serve several purposes: (1) inform emission inventory work underway, (2) develop protocol for use of EPA-R8's Hi-Flow Sampler by compliance staff in the future, (3) build tribal capacity by training environmental staff on use of Hi-Flow and IR camera, and 4) spotlight this emission source to encourage Industry to tackle reductions voluntarily from "existing" sources as well as inform on the impact on emissions from maintenance practices.

### **Wintertime Ozone and Particulate Matter Health Effects Meeting**

- With Utah DAQ, the Ute Tribe and Tri-County Health, Region 8 held a meeting of health and risk communication experts on October 22, 2014 in Ft. Duchesne, Utah. The main purpose of this meeting was to bring together health experts to discuss ongoing research efforts and available health data to allow us to assess potential health risks from air pollution in the Uinta Basin.
- Dr. Lisa McKenzie, from the Colorado School of Public Health, presented on "Health Risks Associated with Development of Unconventional Oil and Gas Resources: Colorado Studies." Dr. Mark Anderson, Associate Professor and Director RMR Pediatric Environment Health Specialty Unit (children's exposure to high levels of ozone) at Denver Health, presented on the "Impacts of Elevated Ozone on Vulnerable Populations: Acute vs. Chronic Exposure." Region 8's Kyle Olson presented on the "Health Effects of Particulate Matter."
- At the meeting, we discussed how this information can be best communicated to the impacted public, and what we can do to support community actions to reduce public exposure to air toxics

and reduce air pollutant emissions. Region 8's Jody Ostendorf facilitated a discussion on "Risk Communication and Outreach Strategy."

- Follow-up teleconference meeting was held on Dec. 3<sup>rd</sup> to discuss a community outreach strategy and how to help with the tribe's evaporation pond study. We have also had follow-up discussions during our monthly State/Tribe/EPA coordination calls. We talked about what the goal of outreach would be, what messages were appropriate, which agencies should take the lead (Tri-County Health has many useful fact sheets, and would be a natural lead). There was concern about unnecessarily alarming people.
- Minnie met with Melissa Zito and Dr. Richey of the Utah Department of Health and the Tribal Epidemiological Center, respectively, on Friday, Jan. 9 to discuss a grant Dr. Richey received from the Center for Disease Control that might help the tribe. The CDC group meets to discuss healthy lifestyles for air quality, focusing on second hand smoke.
- The Intertribal Council, a consulting group out of Phoenix, has a contract with Health and Human Services that works with Indian Health Service in the community. Their grant focuses on health issues such as diabetes, substance abuse and health assessment.